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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,051	02/15/2001	Michael A. Robinson	10004159-1	4769

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EXAMINER	
PAYNE, DAVID C	
ART UNIT	**PAPER NUMBER**
2633	6

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,051	ROBINSON, MICHAEL A.	
	Examiner	Art Unit	
	David C. Payne	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment filed on 6 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *21-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed 6 February 2004 have been fully considered but they are not persuasive.

2. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

3. Regarding applicant' s claim that the cited prior are does not teach a mode selection switch outside of the receiver sub-assembly, more specifically North allegedly teaches against this limitation. While North may integrate the mode selection switch onto the sub-assembly substrate this is not ground for teaching against an embodiment of having the mode selection switch outside the assembly. Furthermore, making parts separable or changing the placement of parts is not considered patentable over the prior art.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buescher et al. US006396351B1 (Buescher) in view of North US006118829A (North) and Jiang et al. US 20020076173A1 (Jiang).

Regarding claim 1,

Buescher disclosed A fiber optic receiver (Figure 2), comprising: an opto-electronic transducer (photodiode not shown at terminal (34), e.g., col./line: 3/1-10); configured to generate an electrical data signal in response to a received optical data signal; an adjustable response preamplifier (32) circuit coupled to the opto-electronic transducer and operable to amplify an electrical data signal generated by the opto-electronic transducer;

Buescher does not disclose a mode selection circuit coupled to an output of the preamplifier circuit and configured to transmit a mode control signal to the preamplifier circuit in response to a received control signal. However, Buescher does disclose the need for the preamplifier to operate over varying bandwidths (e.g., col./line: 2/40-55). North disclosed a mode selection circuit that operates to adjust the bandwidth response and sensitivity of a communications receiver (e.g., col./line: 4/40-55). It would

have been obvious to one of ordinary skill in the art at the time of invention to incorporate the North mode selection switch in the Buescher preamplifier circuit to limit bandwidth response to only that required to obtain good pulse fidelity so that less of the background noise spectrum is amplified and the input sensitivity can be kept correspondingly lower as disclosed by North (see col./line: 3/25-31). Buescher does not disclose that the mode selection switch is outside of the sub-assembly. However, it would have been obvious to one or ordinary skill in the art at the time of invention the mode selection switch can be placed outside of the sub-assembly. Making parts separable or changing the position of parts is not patentable over the prior art.

Buescher does not disclose a lens. Jiang disclosed a receiver assembly comprising a lens (121 or 123 of Figure 1, paragraph 0005). However, it would have been obvious to one or ordinary skill in the art at the time of invention to use the Jiang lenses in the Buescher assembly to minimize manufacturing cost as disclosed by Jiang (paragraph 0029)

Re claim 2,

the modified invention of Buescher and North disclosed the mode selection circuit is configured to transmit the mode control signal to the preamplifier circuit in response to a received data rate control signal (North e.g., col./line: 4/30-35).

Re claim 3,

the modified invention of Buescher and North disclosed the mode selection circuit is configured to transmit the mode control signal to the preamplifier circuit in response to a received power mode control signal (North e.g., col./line: 11/1-20).

Re claim 4,

the modified invention of Buescher and North wherein the mode selection circuit is configured to modulate the mode control signal onto a common line coupled between the preamplifier circuit and the post-amplifier circuit (North Figure 4 (474)).

Re claims 5-7, 9, 11

the modified invention of Buescher and North disclosed wherein the mode selection circuit is configured to modulate the mode control signal onto the common line as a single pulse, or multiple pulse pattern or time-varying signal (North, e.g., col./line: 2/60-67, 9/20-25, Figure 11).

Re claim 8,

the modified invention of Buescher and North disclosed wherein the preamplifier circuit comprises a mode detection circuit configured to generate a response control signal for adjusting the response of the preamplifier circuit based upon the mode control signal transmitted by the mode selection circuit (North, Figure 2 (240), e.g., col./line: 5/53-65).

Re claim 10,

the modified invention of Buescher and North disclosed wherein the mode detection circuit is configured to detect the one or more mode control signal pulses based upon a comparison of a common line voltage with a reference voltage (North, e.g., col./line: 8/50-60).

Re claim 12,

the modified invention of Buescher and North disclosed wherein the mode detection circuit comprises a frequency detector (North, e.g., col./line: 6/1-10).

Re claim 13,

the modified invention of Buescher and North disclosed wherein the preamplifier circuit is configured

to select one of multiple sets of operating parameters based upon the mode control signal transmitted by the mode selection circuit (e.g., bandwidth or voltage, col./line: 5/30-50, 6/1-10).

Re claim 14,

the modified invention of Buescher and North disclosed wherein the preamplifier circuit is configured to adjust one or more bandwidth response parameters in response to a bandwidth mode control signal transmitted by the mode selection circuit (North, e.g., bandwidth response or gain, col./line: 4/30-35, or Vout).

Re claim 15,

the modified invention of Buescher and North disclosed wherein the preamplifier circuit is configured to adjust one or more supply current operating parameters in response to a power mode control signal transmitted by the mode selection circuit

(Buescher, e.g., col./line: 2/55-60).

Regarding claim 16,

the modified invention of Buescher and North does not wherein the mode selection circuit is incorporated within a post-amplifier circuit. However, lacking criticality, placement of parts is not considered patentable over the prior art.

Regarding claims 17-20,

Buescher disclosed an adjustable response preamplifier circuit, coupled to the opto-electronic transducer (Figure 2 (32)), and operable to amplify an electrical data signal generated by the opto-electronic transducer (photodiode not shown at terminal (34), e.g., col./line: 3/1-10); and a post-amplifier circuit (44). Buescher does not disclose a mode control signal connected to the preamplifier adjusted in response to a received data rate control signal. However, Buescher does disclose the need for the preamplifier to operate over varying bandwidths (e.g., col./line: 2/40-55). North disclosed a mode selection circuit that operates to adjust the bandwidth response and sensitivity of a communications receiver (e.g., col./line: 4/40-55). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the North mode selection switch in the Buescher preamplifier circuit to limit bandwidth response to only that required to obtain good pulse fidelity so that less of the background noise spectrum is amplified and the input sensitivity can be kept correspondingly lower as disclosed by North (see col./line: 3/25-31). Buescher does not disclose

integrating a connector along with these components on a substrate. Jiang disclosed integrating a preamplifier, postamplifier, receiver and connector on a common substrate (PCB), e.g., col./line: p1. paragraph 0002, p2. paragraph 0028, p3. paragraph 0030. It would have been obvious to one of ordinary skill in the art at the time of invention to integrate the components as did Jiang for the benefit improved connectivity in a small footprint as disclosed by Jiang see p1. paragraph 0004.

Allowable Subject Matter

6. Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner' s supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp

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